



## Module 9 PMTCT Programme Monitoring

<b>SESSION 1</b>	Introduction to the Programme Cycle
<b>SESSION 2</b>	Global, National, and Healthcare Facility PMTCT Indicators
<b>SESSION 3</b>	PMTCT Programme Monitoring at the Healthcare Facility Level

**After completing the module, the participant will be able to:**

- Describe the programme cycle.
- Discuss the purposes of global and national PMTCT indicators.
- Understand the role of the healthcare worker in monitoring a PMTCT programme.

This module is designed to provide introductory information and skills for monitoring PMTCT programmes. Some healthcare workers may benefit from additional training on PMTCT programme monitoring and evaluation.

### Relevant Policies for Inclusion in National Curriculum

#### Session 2

- National indicators for PMTCT programmes
- Healthcare facility indicators for PMTCT programmes

#### Appendices

- Full set of forms used in the PMTCT programmes



The *Pocket Guide* contains a summary of Session 3.

## SESSION 1 Introduction to the Programme Cycle

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Planning and implementation of a PMTCT programme is part of a larger programme cycle in which healthcare workers play an important role. A successful PMTCT programme requires implementing each step of the programme cycle.

### Programme cycle

The *programme* cycle is the process of assessing a situation and then designing, implementing, monitoring, and evaluating a public health programme in response.

Note the parallels between the programme cycle and clinical case management. The five-step process in a nationwide PMTCT programme cycle is similar to the five-step process a healthcare worker follows when caring for a patient. The healthcare worker:

- Assesses the patient's health by taking a medical history, performing a physical exam, and making the diagnosis
- Designs a patient treatment plan
- Implements the treatment plan
- Monitors the patient's progress
- Evaluates the success of the treatment plan using lab tests, re-examination, and patient self-report

### Assessing

The first step of the programme cycle is to analyse the problem by conducting a needs assessment. In this case, the needs assessment would indicate women are HIV-infected and that infants are dying of HIV/AIDS. It might also indicate where the problem is the greatest (eg, urban or rural areas) and the best way to begin to address the problem.

### Planning

The next step is to plan the specific PMTCT treatment, care, and support programme that will respond to the needs identified in the assessment. Planning will involve making decisions such as which healthcare facilities will offer PMTCT services in the first phase of the programme; how to expand and scale-up the programme; how many and which staff should be trained; what types of equipment, supplies, and physical space are needed.

Planning also requires developing programme guidelines (eg, PMTCT national guidelines), a budget and a programme management plan.

PMTCT programme goals and targets are also developed during the planning step. For example, the programme might aim to provide pre-test information to 100% of new ANC patients and to provide HIV testing to 95% of new patients. While these goals might not be achievable immediately, setting targets to improve coverage rates within a specific time frame can help the staff reach programme goals.

## Implementing

The third step is the implementation of PMTCT services according to the decisions made in the planning phase. Implementation involves training staff, establishing standard procedures for healthcare workers, and integrating the programme into ongoing MCH services. Often, there is a pilot phase when a new programme is introduced at a healthcare facility. During the pilot phase, initial problems can be identified and solved before the programme is fully implemented.

## Monitoring

The next step in the programme cycle, monitoring the PMTCT programme, involves asking questions about the services and the implementation process. Questions about the performance of the programme might include: How many patients is the programme reaching? What percentage of ANC patients receive HIV testing? What percentage of mothers, who are HIV-infected and delivered at a PMTCT site, are receiving ARVs for PMTCT?

## Evaluating

The final step is evaluating the PMTCT programme by asking questions about the impact of the programme. Such questions could include: What are the barriers to full uptake of the programme? How many infants did the programme prevent from getting HIV infection? How might the programme be improved in order to reach its targets and goals more quickly?

Comparing outcomes to previously outlined goals is important for measuring the programme's success.

Steps of the programme cycle occur as part of an ongoing process. Evaluation findings should lead to new planning and implementation. This approach provides a broad perspective on effective monitoring and evaluation, and improves the feasibility of plans and sustainability of projects.

## SESSION 2 Global, National, and Healthcare Facility PMTCT Indicators

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### What is an indicator?

Indicators are summary measures to describe a situation. Indicators provide information on the status of activities related to each step of the programme cycle. Appendix 9-A provides examples of PMTCT performance indicators.

### Indicators for PMTCT programmes

#### Global indicators

Global indicators generally are limited to the final step of the programme cycle and a few key outcomes. They are based on national indicators. Global indicators:

- Reflect, in a few summary numbers, the current worldwide situation regarding PMTCT efforts
- Provide a picture of how countries, on average, are addressing PMTCT
- Help donors understand how to assess the results of past spending and prioritise future funding

*Example of a global PMTCT indicator:* Percentage of pregnant women who are HIV-positive and received a complete course of ARV prophylaxis to reduce the risk of MTCT

#### National indicators

National indicators usually address several steps of the programme cycle. They are estimated from information provided at the local level. National indicators:

- Reflect the goals, objectives, and activities of the national HIV/AIDS programme
- Assess the effectiveness of the national response to PMTCT
- Include the WHO global PMTCT indicators

*Example of a national indicator:* Percentage of pregnant women in the country making at least one ANC visit who have received an HIV test result and post-test counselling

#### Healthcare facility indicators

Healthcare facility indicators—information collected at healthcare facilities—are essential to monitoring and evaluation, and to providing quality healthcare services to patients. National and global indicators are reported based on healthcare facility indicators.

Healthcare facility indicators:

- Help set targets and track progress towards reaching all women and infants who need PMTCT services
- Help identify progress, problems, and challenges
- Aid in finding solutions to the problems of increasing coverage and improving quality of care

*Example of a healthcare facility indicator:* Percentage of women who received HIV pre-test information during ANC and accepted HIV testing

<b>Exercise 9.1 Understanding indicator requirements: small group discussion</b>	
<b>Purpose</b>	<p>To discuss the information needed to measure and track a specific indicator, and how to collect and compile data.</p> <p>To understand the importance of shared definitions of terminology in data collection.</p> <p>To view monitoring from a national level.</p>
<b>Duration</b>	25 minutes
<b>Instructions</b>	<p>In your group, pretend to be a member of the national PMTCT monitoring team that advises the MOH on PMTCT monitoring indicators. Focus on the percentage of pregnant women who were HIV-infected and received ARV prophylaxis as recommended in the national guidelines, then address the following questions:</p> <ul style="list-style-type: none"> <li>▪ What is the definition of the indicator? (What does it measure?)</li> <li>▪ What information is needed to fully understand this indicator? (such as knowing the PMTCT protocol, drug/drugs used for ARV prophylaxis, etc)</li> <li>▪ Why is the indicator important?</li> <li>▪ What healthcare facility information is used to calculate this indicator?</li> <li>▪ One member of the group will record the answers on a flipchart and present them to the larger group.</li> </ul>

## SESSION 3 PMTCT Programme Monitoring at the Healthcare Facility Level

### What is monitoring?

Monitoring is regular tracking of key programme elements.

Monitoring of the PMTCT programme will help to:

- Assess programme performance
- Detect and correct performance problems
- Make more efficient use of PMTCT programme resources

Because monitoring data provide much of the information needed to track programme performance and make programme changes, this session focuses on monitoring data that are routinely collected through record-keeping at the healthcare facility.

### What is evaluation?

Evaluation is measuring the changes in a situation resulting from an intervention.

A formal evaluation of the PMTCT programme will demonstrate to what extent the programme contributed to changes in the indicators. Formal evaluations should be conducted intermittently to try to examine the ways in which the PMTCT programme is causing these changes.

### What is a monitoring system?

A monitoring system is a group of components used to track programme activities. PMTCT programme monitoring should include all activities aimed at providing the minimum package of services for preventing mother-to-child transmission including:

- HIV testing and counselling for pregnant women
- ARV treatment and prophylaxis to prevent MTCT
- Counselling and support for safe infant-feeding practices
- Family planning counselling or referral

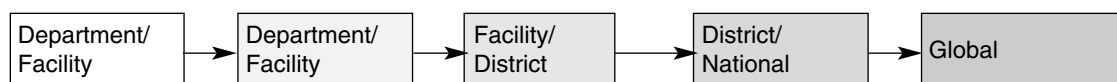
Typically, data on these activities are recorded at the healthcare facility, compiled at a district level, and forwarded to the national level for aggregation as illustrated in Figure 9.1.

**Figure 9.1 Flow of Recordkeeping Data**

#### Type of Report



#### Place Generated



## Characteristics of a PMTCT programme monitoring system

A PMTCT monitoring system includes:

- Clear definitions of indicators
- Standard tools, data source, and methodologies
- Clear guidelines and protocols

Examples of guidelines and protocols might address: What data quality assurance procedures should be implemented? How often and to whom will reports be sent? How will reports be used and disseminated?

Ideally, staff members will record the PMTCT services provided in standard ANC and maternity ward registers as part of routine MCH data collection. Periodic summary reports summarise register information for local programme management and reporting.

*See Appendix 9-B for sample PMTCT columns to add to standard MCH registers and sample PMTCT monthly summary forms.*

In every healthcare facility where PMTCT services are delivered, it is important to designate staff and outline their responsibilities in the monitoring process. Clear roles and responsibilities should be defined for staff involved in:

- Data collection
- Analyses
- Reporting
- Dissemination
- Data use

## Using monitoring information for intervention-related decision-making

Monitoring information should be reviewed periodically to assess programme performance and improve programme procedures. Monitoring information is used for decision-making about the PMTCT programme at local, national, and global levels.

Consider an example of decision-making based on a healthcare facility-level indicator:

*Percentage of women who deliver at a PMTCT site who know their HIV status*

If decision-makers at the healthcare facility offering PMTCT services see that a low percentage of women know their HIV status, they should first try to understand the causes before making recommendations to remedy the situation. They might further investigate:

- Of the women who do not know their HIV status at delivery, what percentage attended ANC?
- Is the ANC clinic reaching its HIV testing targets?
- Is HIV testing and counselling during labour being offered to women according to protocol?

Depending on the answers to these or similar questions, possible interventions or recommendations might include:

- Improving outreach to pregnant women to increase ANC attendance
- Modifying ANC procedures to increase testing and counselling coverage
- Increasing maternity ward staffing resources in an effort to increase HIV testing rates during labour

Exercise 9.2 Using indicators: small group discussion	
<b>Purpose</b>	To interpret monitoring data from a PMTCT service and consider recommendations to improve performance.
<b>Duration</b>	15 minutes
<b>Instructions</b>	<p>For this exercise, you are upper-level administrators and clinicians working in a busy PMTCT on the outskirts of the national capital. The clinic executive director calls you into a meeting to help him interpret the annual PMTCT monitoring data. He starts the meeting by writing the following on a flipchart in the front of the meeting room:</p> <p><i>Number and percentage of pregnant women receiving ARV prophylaxis</i></p> <p>The executive director reports that the MOH has discovered that nationwide only 25% of pregnant women who are HIV-infected received ARV prophylaxis in 2003. He writes 25% on the flipchart, just to emphasise his point. The executive director continues by saying that your healthcare facility is among those administering ARV prophylaxis to the lowest percentage—with only 18% of pregnant women who are HIV-infected receiving ARV prophylaxis; he writes 18% on the flipchart. He explains to the group that he called the meeting to find out from "my best and brightest clinicians and administrators from the PMTCT Clinic" why the numbers are so low. He waits for a response.</p> <p>With the others in your small group, discuss the following topics:</p> <ul style="list-style-type: none"> <li>▪ What is your interpretation of the monitoring data, ie, why do you think so few women receive ARV prophylaxis?</li> <li>▪ Identify any additional information needed to better understand the data.</li> <li>▪ Choose the most plausible interpretation that your group produced. Determine a set of recommendations your staff can follow to address the gap between guidelines and practice.</li> </ul>

### How can healthcare workers ensure data collected is useful?

Ensuring optimal use of data for decision-making and effective management of the PMTCT programme requires accurate and timely data. The accuracy of the information is also critical to providing quality healthcare services.



*The information from a monitoring system is only as useful as the quality of the information collected in clinic registers or on patient forms.*

Healthcare workers who are responsible for recording PMTCT services and patient health information are strongly advised to adhere to the following procedures:

- *Understand the data to be collected.* Before you record information, make sure that you understand the data requested.
- *Record the data every time.* Record on the appropriate form each time you perform a procedure, see an HIV-positive patient, prescribe an ARV drug, receive a test result, provide a referral, or engage in any other PMTCT activity.
- *Record all the data.* Make sure you have provided all the information requested on the monitoring form. Doing so might even require noting when you did not provide a service.
- *Record the data in the same way every time.* Use the same definitions, the same rules, and the same tests for reporting the same piece of information over time. Sometimes, however, doing so will not be possible, particularly when tests and definitions change as a result of new treatments and technologies. When it is not possible to record the data in the same way, make a note that describes the change.

Healthcare workers are responsible for knowing who is accountable for the monitoring activities, recording data reliably and accurately, and knowing how and when to report information and indicators.

Healthcare workers can contribute to making the overall monitoring process as accurate and reliable as possible by providing feedback about:

- How the system is working
- Useful methods for sharing information
- Whether the monitoring tools are easy to complete accurately and reliably

Exercise 9.3 Completing local PMTCT forms	
<b>Purpose</b>	To understand the use of local PMTCT forms.
<b>Duration</b>	15 minutes
<b>Instructions</b>	As the facilitator reviews the local PMTCT forms, participate in the discussion about the information needed to complete these forms and ways to obtain these data.

## Module 9: Key Points

- Program cycle steps include:
  - Assessing
  - Planning
  - Implementation
  - Monitoring
  - Evaluation
- Global, national, and facility level indicators measure progress toward programme goals.
- Monitoring is the routine tracking of programme information.
- Accurate facility registers and records provide essential information for monitoring PMTCT programmes.

## APPENDIX 9-A Examples of PMTCT performance indicators

### Global and national PMTCT indicators<sup>1</sup>

- Existence of national guidelines for the prevention of HIV infection in infants and young children and the care of infants and young children in accordance with international or commonly agreed-upon standards
- Percentage of public, missionary, and workplace venues offering the minimum package of services for preventing HIV infection in infants and young children in the preceding 12 months
- Percentage of pregnant women making at least one ANC visit who have received an HIV test result and post-test counselling
- Percentage of women who are HIV-infected and receiving a complete course of ARV prophylaxis to reduce MTCT in accordance with a nationally-approved treatment protocol in the preceding 12 months
- Percentage of infants who are HIV-positive born to women who are HIV-infected

<sup>1</sup> Source. UNAIDS, World Health Organization. 2004. *National Guide to Monitoring and Evaluating Programmes for the Prevention of HIV in Infants and Young Children*. Retrieved 6 June 2004, from [http://www.who.int/hiv/pub/prev\\_care/en/nationalguideyoungchildren.pdf](http://www.who.int/hiv/pub/prev_care/en/nationalguideyoungchildren.pdf)

### Sample health facility PMTCT indicators

- Percentage of women starting ANC who receive pre-test counselling
- Percentage of women starting ANC who receive HIV testing
- Percentage of women who are HIV-infected who receive their test results and post-test counselling
- Percentage of women who are HIV-negative and receive their test results and post-test counselling
- Number of male partners who are HIV-tested
- Number of women attending ANC receiving ARVs for PMTCT
- Percentage of women with unknown HIV status at delivery
- Percentage of women with unknown HIV status who were tested at/after delivery
- Percentage of women who are HIV-infected who took a full course of ARVs for PMTCT
- Percentage of infants who were HIV-exposed and received ARVs
- Percentage of women who are HIV-infected and intend to replacement feed

## APPENDIX 9-B Sample PMTCT columns to add to standard ANC and maternity ward registers

ANC Register

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Date Started ANC	Reg. No.	Date Pre-test Counselling	Date Tested for HIV	HIV Test Result	Date Post-Test Counselling	ARV Given	Date ARV Started
				P N U		(NVP, AZT, AZT+NVP, HAART )	

ANC Partner Register

(1)	(2)	(3)	(4)	(5)
Reg. No.	Date Pre-test Counselling	Date HIV-Tested	HIV Test Result	Date Post-Test Counselling
			P N U	

Maternity Register

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Date	Reg. No.	HIV Status from ANC	HIV Test Result at/after Delivery	ARV Woman Took During Pregnancy	Number of Weeks Woman Took ARV During Pregnancy	ARV Woman Took in Labour	Date Infant Received NVP	ARV Infant Discharged With	ARV Infant Discharged With
		P N U	P N	(AZT, AZT+3TC, HAART)	< 4 weeks ≥ 4 weeks	(NVP, AZT, AZT+NVP, HAART )		(AZT)	B R

Source: CDC. Prevention of Mother-to-Child HIV Transmission – Monitoring System (PMTCT-MS), Draft June 2004.  
P = positive, N = negative, U = unknown

## APPENDIX 9-B Sample PMTCT columns to add to standard ANC and maternity ward registers *(continued)*

### Sample PMTCT antenatal clinic (ANC) monthly summary form

Facility:	Level of Facility:	Month of Report:
District:	Region:	
Date Form Completed:	Year of Report:	

#### ANC Counselling and Testing

All women attending ANC during the month of report.		Number
<b>ANC 01.</b>	Number starting ANC this month .....	_____
<b>ANC 02.</b>	Not pre-test counselled .....	_____
<b>ANC 03.</b>	Pre-test counselled .....	_____
<b>ANC 04.</b>	Did not have HIV test .....	_____
<b>ANC 05.</b>	Had HIV test .....	_____
<b>ANC 06.</b>	Tested HIV-negative .....	_____
	<b>ANC 06.1.</b> Post-test counselled .....	_____
	<b>ANC 06.2.</b> Not post-test counselled .....	_____
<b>ANC 07.</b>	Tested HIV-positive .....	_____
	<b>ANC 07.1.</b> Post-test counselled .....	_____
	<b>ANC 07.2.</b> Not post-test counsele .....	_____
<b>ANC 08.</b>	Tested but unknown/lost result .....	_____

#### ANC Partner Testing

These numbers do not always relate directly to the numbers of women starting ANC this month.

<b>ANC 09.</b>	Number of partners tested for HIV .....	_____
	<b>ANC 09.1.</b> Tested HIV-negative .....	_____
	<b>ANC 09.2.</b> Tested HIV-positive .....	_____
	<b>ANC 09.3.</b> Tested but unknown/lost result .....	_____

#### ANC Antiretroviral Coverage

Numerator data of women starting on drug during the month of report. These numbers do not relate directly to the numbers from the Antenatal Counselling and Testing section.

<b>ANC 10.</b>	Started on, or given NVP .....	_____
<b>ANC 11.</b>	Started on, or given AZT .....	_____
<b>ANC 12.</b>	Started on, or already taking HAART .....	_____

Source: CDC. Prevention of Mother-to-Child HIV Transmission – Monitoring System (PMTCT-MS), Draft June 2004.

## APPENDIX 9-B Sample PMTCT columns to add to standard ANC and maternity ward registers *(continued)*

### Sample PMTCT maternity (L&D) monthly summary form

Facility:	Level of Facility:	Month of Report:
District:	Region:	
Date Form Completed:	Year of Report:	

	Number
<b>MAT 01.</b> Number of women who delivered .....	_____
<b>MAT 02.</b> Number of women who had HIV test from ANC .....	_____
<b>MAT 02.1.</b> Number of women with known HIV-negative test from ANC .....	_____
<b>MAT 02.2.</b> Number of women with known HIV-positive test from ANC .....	_____
<b>MAT 03.</b> Number of women with unknown HIV status at delivery .....	_____
<b>MAT 04.</b> Number of women tested for HIV at/after deliver .....	_____
<b>MAT 04.1.</b> Number HIV-negative .....	_____
<b>MAT 04.2.</b> Number HIV-positive .....	_____

*The section below pertains to all identified HIV-positive women who delivered live births.*

<b>MAT 05.</b> All HIV-positive women (MAT 02.2. + MAT 04.2) .....	_____
<b>MAT 06.</b> Number who took AZT in ANC .....	_____
<b>MAT 06.1.</b> Took AZT <2 weeks .....	_____
<b>MAT 06.2.</b> Took AZT 2–4 weeks .....	_____
<b>MAT 06.3.</b> Took AZT >4 weeks .....	_____
<b>MAT 07.</b> Number who took nevirapine (NVP) .....	_____
<b>MAT 08.</b> Number who took NVP only .....	_____
<b>MAT 09.</b> Number who took highly active antiretroviral therapy HAART .....	_____
<b>MAT 09.1.</b> Took HAART <2 weeks .....	_____
<b>MAT 09.2.</b> Took HAART 2–4 weeks .....	_____
<b>MAT 09.3.</b> Took HAART >4 weeks .....	_____
<b>MAT 10.</b> Number whose infant(s) received NVP .....	_____
<b>MAT 11.</b> Number whose infants discharged with ARV .....	_____
<b>MAT 12.</b> Number intending to breastfeed .....	_____
<b>MAT 13.</b> Number intending to replacement feed .....	_____

Source: CDC. Prevention of Mother-to-Child HIV Transmission – Monitoring System (PMTCT-MS), Draft June 2004.



## Field Visit (optional)



**Total Time:** half day

### Goal of the field visit

The goal of the field visit is to reinforce the classroom learning by providing participants with an observation experience in a PMTCT facility setting, such as an ANC clinic, labour and delivery facility, or follow-up treatment centre.

### Timing and objectives of field visit

The field visit can take place any time after *Module 6: HIV Testing and Counselling for PMTCT*. If necessary, the field visit can take place the week after the training course. The timing of the visit and the people with whom trainees will meet is based on the learning objectives. The objectives may include any of the following:

- To observe an HIV information session
- To observe an HIV counselling session
- To observe rapid testing
- To observe the provision of advice and support around ARV treatment/prophylaxis
- To observe the provision of infant feeding counselling and support
- To observe the use of universal precautions in the labour and delivery setting
- To gain an understanding of the management of occupational exposure to HIV including post-exposure prophylaxis
- To discuss PMTCT programme monitoring
- To observe the provision of support to a patient who is HIV-infected
- To observe referral and follow-up of patients to treatment, care, and support services

## Field visit guide

This guide was developed as a resource for a field visit to a healthcare facility providing PMTCT services. The following questions may be addressed to healthcare workers, site supervisors, and programme managers but the questions should be reviewed beforehand in light of the local context. In addition to listening, field visit participants will also gain information by observing the layout of the facility, attitudes of staff when they interact with patients, the volume of patients, and the overall atmosphere.

### Antenatal care (ANC)

- How many ANC patients come here per month?
- How many new ANC patients come here per month?
- What is the typical flow of activities during a woman's first visit to ANC?
- Whom does she see?
- What activities occur?
- Where does she go?

### HIV testing and counselling

- Are patients routinely offered HIV testing? Is an opt-in or opt-out approach used?
- Which of the following pre-testing services are provided?
  - Group education
  - Individual pre-test counselling
  - Couples pre-test counselling
  - Ongoing HIV counselling for women who refuse testing
- What is the HIV testing process (for adults and infants)?
  - Type of test
  - Testing algorithm
  - Where tests are performed
  - Staff who perform testing
  - Average number of tests per week
  - Describe the procedures for providing HIV test results

### ARV treatment/prophylaxis for PMTCT

- Which regimens are provided?
- What are the main counselling messages and recommendations about ARV treatment/prophylaxis for PMTCT?
- What is the process for providing ARVs to the women who are HIV-infected and their infants?

### Labour, delivery and postpartum care

- How many babies are delivered per month?
- Approximately what percentage of women deliver at home?
- Approximately what percentage of women who deliver here know their HIV status?



### Infant feeding

- What are the main infant-feeding messages provided?
- Is infant formula provided?
- When is infant-feeding counselling provided?
- How is support for women's infant-feeding choices provided?

### Stigma and discrimination related to MTCT

- What are the systems or steps used to protect confidentiality?
- What are the systems or steps used to reduce stigma and discrimination in the facility?
- What are common concerns about and experiences regarding stigma and discrimination discussed by patients?

### Linkages to treatment, care and support for mothers and families

- What are the linkages to other programs or community organisations providing the following services?
  - Home-based care
  - Psychosocial services to persons living with HIV/AIDS
  - Family planning
  - ARV treatment
  - Infant-feeding support
  - HIV counselling and testing
- What are the mechanisms used to follow-up referrals?

### Safety and supportive care in the work environment

- How do counsellors receive emotional support to share experiences and alleviate burn out?
- How would you describe staff attitudes towards the PMTCT programme, satisfaction, support, workload?
- How would you describe the adequacy of supplies and equipment to follow infection control procedures?
- How does this facility dispose of potentially contaminated waste and items that are not reused (eg, bandages, syringes, etc.)?
- What is the method used here to sterilise equipment?

### PMTCT programme monitoring

- What is the PMTCT data collection and reporting process?
- Can you show me the tools you use to record PMTCT services you provide?
- What are the measures used to ensure quality information is collected and reported?
- Can you tell me how information collected in the PMTCT program is used to improve the programme?

## Notes

[illegible]